



SRI RAMAKRISHNA COLLEGE OF ENGINEERING

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai
Sri Saradha Nagar, Perambalur - 621 113. Mobile: 95655 44688 Website: www.sriramakrishna.ac.in

Date: 11.10.2022

**Dr.M.Marimuthu M.E., Ph.D.,
PRINCIPAL**

To
The Director,
Controller of Examination
Anna University,
Chennai.

Respected Sir,

Sub: Submission of 2021-2022 feedback from various stakeholders related to our curriculum and syllabus-Regd.,

Ref: Feedback received from our various Stack holders

We are grateful to Anna University for including most of our suggestions in the 2021 curriculum and syllabus. We collected feedback from students, teachers, alumni, and employers to improve academic quality and identify curriculum gaps based on current needs. We have compiled key suggestions regarding the curriculum and syllabus. It gives us great pleasure to share them with you for additional action and improvement.

Suggestions related to curriculum and syllabus:

1. We recommend expanding the curriculum to include more theory-cum practical relevant courses.
2. Some theory papers from the eighth semester should be moved to previous semesters, in our opinion. With this modification, students will be able to focus entirely on their final semester project work, internships, and placement preparation.
3. We suggest that the curriculum include commonly used and well-liked product-specific technology and tools like AWS, AIML, and digital marketing.
4. There aren't many suggested text books or reference books on the market that deal with the newly growing fields.

Thanking You



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ANNA UNIVERSITY, CHENNAI
AFFILIATED INSTITUTIONS
B.E. ELECTRONICS AND COMMUNICATION ENGINEERING
REGULATIONS – 2017
CHOICE BASED CREDIT SYSTEM
SEMESTER VII


Sl.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	EC8701	Antennas and Microwave Engineering	PC	3	3	0	0	3
2.	EC8751	Optical Communication	PC	3	3	0	0	3
3.	EC8791	Embedded and Real Time Systems	PC	3	3	0	0	3
4.	EC8702	Ad hoc and Wireless Sensor Networks	PC	3	3	0	0	3
5.		Professional Elective -III	PE	3	3	0	0	3
6.		Open Elective - II	OE	3	3	0	0	3
PRACTICALS								
7.	EC8711	Embedded Laboratory	PC	4	0	0	4	2
8.	EC8761	Advanced Communication Laboratory	PC	4	0	0	4	2
TOTAL				26	18	0	8	22

SEMESTER VIII

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.		Professional Elective IV	PE	3	3	0	0	3
2.		Professional Elective V	PE	3	3	0	0	3
PRACTICALS								
3.	EC8811	Project Work	EEC	20	0	0	20	10
TOTAL				26	6	0	20	16

TOTAL NO. OF CREDITS: 186




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**ANNA UNIVERSITY, CHENNAI
NON-AUTONOMOUS AFFILIATED COLLEGES
REGULATIONS 2021
B.E. ELECTRONICS AND COMMUNICATION ENGINEERING
CHOICE BASED CREDIT SYSTEM
CURRICULUM AND SYLLABI FOR SEMESTERS I TO VIII**

SEMESTER VII / VIII*

S. NO	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1.	GE3791	Human Values and Ethics	HSMC	2	0	0	2	2
2.		Elective - Management [#]	HSMC	3	0	0	3	3
3.		Open Elective - II**	OEC	3	0	0	3	3
4.		Open Elective - III**	OEC	3	0	0	3	3
5.		Open Elective - IV**	OEC	3	0	0	3	3
PRACTICALS								
6.	EC3711	Summer internship	EEC	0	0	0	0	2
TOTAL				14	0	0	14	16

*If students undergo internship in Semester VII, then the courses offered during semester VII will be offered during semester VIII.

** Open Elective II - IV (Shall be chosen from the list of open electives offered by other Programmes).

[#] Elective - Management shall be chosen from the Elective Management courses.

SEMESTER VIII / VII*

S. NO	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
PRACTICALS								
1.	EC3811	Project Work / Internship	EEC	0	0	20	20	10
TOTAL				0	0	20	20	10

*If students undergo internship in Semester VII, then the courses offered during semester VII will be offered during semester VIII.

TOTAL CREDITS: 162




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Dr.T.Karthikeyan., M.E., Ph.D.,
Principal

27.03.2021

To
The Director,
Controller of the Examination,
Anna University, Chennai-25.

Respected Sir,

SUB: Submission of feedback from various stack holders of the Sri Ramakrishna College-related to the curriculum and Syllabus of Regulation 2017.

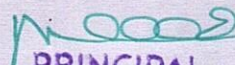
This is to bring to your kind notice that the Sri Ramakrishna College of Engineering has taken feedback from various stakeholders like students, teachers, alumni and employers for enhancing the academic quality and identifying the gaps between industry and institution based on curriculum and syllabus. We are very pleased to bring to your kind notice that the following consideration by our stakeholders for further action and improvements.

This letter focuses on students' selection of electives papers are particularly add the additive manufacturing laboratory as part of their university degree programme. The students are getting perplexed in choosing the electives when they are in 5th semester. They are unable to appear for the exam when they fail to clear the paper in the 5th semester as the exams of the elective papers fall on the same data in next semester.


We request you to make changes while framing the next syllabus in the forthcoming regulations as it would help the students for better performance in their academics.

Thank you,

Encl: R-2017 Syllabus and List of elective subjects


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REFERENCES:

1. Bazara M.J., Jarvis and Sherali H., "Linear Programming and Network Flows", John Wiley, 2009.
2. Budnick F.S., "Principles of Operations Research for Management", Richard D Irwin, 1990.
3. Philip D.T. and Ravindran A., "Operations Research", John.Wiley, 1992.
4. Shennoy G.V. and Srivastava U.K., "Operation Research for Management", Wiley Eastern, 1994.
5. Tulsian and Pasdey V., "Quantitative Techniques", Pearson Asia, 2002.

MF8071

ADDITIVE MANUFACTURING

L T P C
3 0 0 3

OBJECTIVES:

- To know the principle, methods, possibilities and limitations as well as environmental effects of Additive Manufacturing technologies.
- To be familiar with the characteristics of the different materials those are used in Additive Manufacturing technologies.

UNIT I INTRODUCTION

9

Overview - Need - Development of Additive Manufacturing Technology -Principle - AM Process Chain- Classification -Rapid Prototyping- Rapid Tooling - Rapid Manufacturing - Applications- Benefits -Case studies.

UNIT II DESIGN FOR ADDITIVE MANUFACTURING

9

Design tools: Data processing - CAD model preparation - Part orientation and support structure generation - Model slicing -Tool path generation- Design for Additive Manufacturing: Concepts and objectives- AM unique capabilities - DFAM for part quality improvement- Customised design and fabrication for medical applications.

UNIT III PHOTOPOLYMERIZATION AND POWDER BED FUSION PROCESSES

9

Photo polymerization: SLA-Photo curable materials - Process - Advantages and Applications. Powder Bed Fusion: SLS-Process description - powder fusion mechanism - Process Parameters - Typical Materials and Application. Electron Beam Melting.

UNIT IV EXTRUSION BASED AND SHEET LAMINATION PROCESSES

9


Extrusion Based System: FDM-Introduction - Basic Principle - Materials - Applications and Limitations - Bioextrusion. Sheet Lamination Process:LOM- Gluing or Adhesive bonding - Thermal bonding.

UNIT V PRINTING PROCESSES AND BEAM DEPOSITION PROCESSES

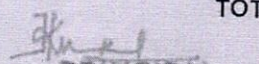
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Droplet formation technologies - Continuous mode - Drop on Demand mode - Three Dimensional Printing - Advantages - Bioplotter - Beam Deposition Process:LENS- Process description - Material delivery - Process parameters - Materials - Benefits - Applications.

TOTAL: 45 PERIODS


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OUTCOME:

- On completion of this course, students will learn about a working principle and construction of Additive Manufacturing technologies, their potential to support design and manufacturing, modern development in additive manufacturing process and case studies relevant to mass customized manufacturing.

TEXT BOOKS:

- 1 Chua C.K., Leong K.F., and Lim C.S., "Rapid prototyping: Principles and applications", Third edition, World Scientific Publishers, 2010.
- 2 Ian Gibson, David W. Rosen, Brent Stucker "Additive Manufacturing Technologies: Rapid Prototyping to Direct Digital Manufacturing" Springer, 2010.

REFERENCES:

- 1 Andreas Gebhardt "Understanding Additive Manufacturing: Rapid Prototyping, Rapid Manufacturing" Hanser Gardner Publication 2011.
- 2 Kamrani A.K. and Nasr E.A., "Rapid Prototyping: Theory and practice", Springer, 2006.
- 3 Liou L.W. and Liou F.W., "Rapid Prototyping and Engineering applications :A tool box for prototype development", CRC Press, 2007.
- 4 Tom Page "Design for Additive Manufacturing" LAP Lambert Academic Publishing, 2012.

GE8077

TOTAL QUALITY MANAGEMENT

L T P C
3 0 0 3

OBJECTIVE:

- To facilitate the understanding of Quality Management principles and process.

UNIT I INTRODUCTION

Introduction - Need for quality - Evolution of quality - Definitions of quality - Dimensions of product and service quality - Basic concepts of TQM - TQM Framework - Contributions of Deming, Juran and Crosby - Barriers to TQM - Customer focus - Customer orientation, Customer satisfaction, Customer complaints, Customer retention. **9**

UNIT II TQM PRINCIPLES

Leadership - Quality Statements, Strategic quality planning, Quality Councils - Employee involvement - Motivation, Empowerment, Team and Teamwork, Recognition and Reward, Performance appraisal - Continuous process improvement - PDCA cycle, 5S, Kaizen - Supplier partnership - Partnering, Supplier selection, Supplier Rating. **9**

UNIT III TQM TOOLS AND TECHNIQUES I

The seven traditional tools of quality - New management tools - Six sigma: Concepts, Methodology, applications to manufacturing, service sector including IT - Bench marking - Reason to bench mark, Bench marking process - FMEA - Stages, Types. **9**

UNIT IV TQM TOOLS AND TECHNIQUES II

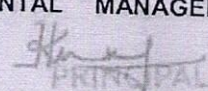
Quality Circles - Cost of Quality - Quality Function Deployment (QFD) - Taguchi quality loss function - TPM - Concepts, improvement needs - Performance measures. **9**

UNIT V QUALITY MANAGEMENT SYSTEM

Introduction—Benefits of ISO Registration—ISO 9000 Series of Standards—Sector-Specific Standards—AS 9100, TS16949 and TL 9000— ISO 9001 Requirements—Implementation— Documentation—Internal Audits—Registration—**ENVIRONMENTAL MANAGEMENT SYSTEM:** **9**


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